

Editorial

Diego Rodríguez-Chiaradìa^{1,2,3,4,*}

¹Pulmonology Department, Hospital del Mar, Barcelona, Spain; ²Hospital del Mar Research Institute, Barcelona, Spain; ³Department of Medicine and Life Sciences (MELIS), Universitat Pompeu Fabra (UPF), Barcelona, Spain; ⁴Centro de Investigación en Red de Enfermedades Respiratorias, (CIBERES), Instituto de Salud Carlos III (ISCIII), Barcelona, Spain

Pulmonary embolism (PE) is the third leading cause of cardiovascular-related deaths, after coronary artery disease and stroke, being the result of most severe clinical presentation of venous thromboembolic disease. While advances in diagnostic approaches, risk stratification, and treatment options have improved our ability to manage PE, it remains a major problem due to its substantial impact on morbidity, mortality, and healthcare resource utilization.

The clinical presentation of PE varies widely ranging from individuals who are asymptomatic with an incidental finding on routine examination, to those experiencing severe symptoms and unstable hemodynamics, placing them at risk of life-threatening complications. Otero et al.¹ provide an overview of the main aspect for most current diagnostic strategies validated in PE. In this regard,

the first review of the current issue addresses how to assess the clinical probability of PE, the diagnostic value of basic readily accessible tests, diagnostic tests, and their integration into validated algorithms.

In the second review of this issue about PE, Paciocco et al.² provide an overview of hemodynamically stable pulmonary embolism management and treatment. Several advances have led to the development of newer techniques and drugs aimed at improving pulmonary embolism management, reducing its associated morbidity and mortality, and the complications related to anticoagulation. Although the latest clinical guidelines prefer direct oral anticoagulant agents (DOACs) over vitamin K antagonists, an individualized approach should be considered for certain categories of patients.

*Correspondence to:
Diego Rodríguez-Chiaradìa
E-mail: darodriguez@psmar.cat

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As we can read in the third review of this issue: *It has been estimated that around 85% of the costs related to the management of PE are attributed to hospital stay.* For this reason, de Miguel et al.³ explore the contemporary approach to outpatient management of PE, emphasizing the criteria for selecting appropriate patients through a careful assessment of clinical and psychosocial factors, as well as addressing the unique challenges inherent in this approach. It underscores the critical role of comprehensive patient education, a strong support system, and well-defined follow-up protocols in ensuring the effectiveness of outpatient care for PE, alongside the contribution of novel therapies in supporting home-based treatment strategies.

During the last decade, multiple catheter-based techniques and devices have been developed to manage PE, including local thrombolysis, ultrasound-facilitated local thrombolysis, and medium- and large-bore

aspiration catheters. Real et al.⁴ provide in the last review an extensive information about the available options of catheter-directed interventions and the potential clinical scenarios to implement it in near future.

In summary, this issue of the journal represents an update on hot topics aspects of PE for improve the management of our patients. We believe that the information provided is of great use for clinical practice.

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